


IMT Mines Alès
École Mines-Télécom


SCIENCE & CREATIVITY TO INVENT A SUSTAINABLE WORLD

NOUS RECRUTONS

Assistant Professor / Lecturer in machine learning applied to biosignal processing M/F

Institution:	IMT Mines Alès (National School of Mines of Alès)
Main assignment:	Center for Teaching and Research in Computer Science and Systems
Administrative residence:	Alès (Gard department – Occitanie region)
Type of contract:	Permanent contract – Public law contract – Full-time
Start date:	**March 2, 2026**

1. About IMT Mines Alès and CERIS

1.1 The Institut Mines-Télécom

The Institut Mines-Télécom (IMT) is a leading public institution under the French Education Code, is a public scientific, cultural, and professional institution (EPSCP) under the primary supervision of the ministers responsible for industry and digital technology. The leading group of engineering schools in France, it brings together 11 public engineering schools across the country, which train 13,500 engineers and PhDs. IMT employs 4,500 people and has an annual budget of €400 million, 40% of which comes from its own resources. IMT has two Carnot institutes, 35 industrial chairs, produces 2,100 A-rank publications and 60 patents annually, and carries out €110 million worth of contract research.

1.2 IMT Mines Alès

The school's raison d'être: "Thanks to its membership of IMT and its strong regional roots, IMT Mines Alès gives its students the best opportunities to fulfill their professional potential and become responsible players in the development of the nation while preserving the planet's resources." The values that drive us: boldness, commitment, sharing, and excellence.

Founded over 180 years ago, IMT Mines Alès currently has 1,400 students (including 250 international students) and 380 staff members. It has two campuses in Alès and also has locations in Montpellier and Pau. Its students are general engineers, specialist engineers (through apprenticeships), doctoral students, and master's or specialized master's students. It welcomes more than 500 trainees in continuing professional education.

IMT Mines Alès is a prestigious elite engineering school ranked among the best engineering schools nationally and internationally. Founded in 1843, our school is located in Alès, a small town and capital of the Cévennes region, where the quality of life is greatly appreciated by its inhabitants. A town in the Gard department (30), 30 km north of Nîmes, Alès is located at the foot of the Cévennes National Park, of which it is by far the most




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important city in terms of population, with 42,452 inhabitants and a metropolitan area of 133,546 inhabitants (29th largest metropolitan area in France, 5th in Occitanie).

The school has three research and teaching centers of high scientific and technological caliber, working in the fields of materials and civil engineering (C2MA), the environment and risks (CREER), and artificial intelligence and industrial and digital engineering (CERIS). These entities bring together around 85 permanent teacher-researchers (half of whom are HDR), 40 research support staff, and 100 doctoral and post-doctoral students, who produce more than 130 A-ranked publications and €3 million in research contracts each year, a third of which are direct contracts with companies. These research staff contribute to six research units, including four joint research units (UMR). IMT Mines Alès is accredited to award doctoral degrees in four doctoral schools.

It has 12 technology platforms and 1,600 partner companies. Creativity is a key feature that permeates all its activities. The school was the first to create an incubator in 1984 (200 companies created to date, 1,000 jobs). The school offers rich and varied career paths: faculty members have opportunities for professional mobility within the various IMT schools and can also, if they wish, take on responsibilities within the school's functional departments (academic affairs, research, international affairs, economic development, etc.) for part of their time.

At IMT Mines Alès, each person is a key player in our Sustainable Development and Social Responsibility (SDSR) approach. We are committed to promoting environmentally friendly practices, fostering diversity and inclusion, and ensuring ethics in our activities. We encourage all our staff to adopt a responsible approach in their daily actions and to propose innovative ideas that reinforce our positive impact on society and the environment.

1.3 Center for Teaching and Research in Information Systems and Management (CERIS)

CERIS is home to two research units: SyCoIA (Complex Systems and Artificial Intelligence), which aims to master complex systems in the context of change linked to the rise of digital technology, and EuroMov Digital Health in Motion (EuroMov DHM), jointly supervised by IMT Mines Alès - University of Montpellier, which focuses on human sensorimotor performance with applications mainly in health and sports. Two teaching departments are attached to CERIS: 2IA for Computer Science and Artificial Intelligence and PRISM for Industrial Performance and Mechatronic Systems, as well as two technology platforms, AIHM for Alès Imaging and Human Metrology and PFM for Mechatronics Platform.

The Industry of the Future area of excellence is a new way of thinking about and organizing business, relying heavily on key principles, resources, and technologies that have an organizational, methodological, and technological impact. The PRISM department offers students the opportunity to specialize in industrial and mechatronic systems engineering to meet the challenges of digital transition in the service of performance. Among other things, it focuses on strong skills in complex systems engineering.

In the midst of technological change, our organizations (industrial, educational, medical, governmental, administrative, and financial) are increasingly connected and rely on IT tools and solutions that give artificial intelligence an increasingly important role. The 2IA department offers students the opportunity to specialize in software application development to meet the challenges posed by this change. It is available in two options in the initial training program and one option in the apprenticeship program.

1.4 Presentation of the research team

The successful candidate will be assigned to the EuroMov DHM research unit. They will report to the director of CERIS and will be functionally responsible to the EuroMov DHM representative.

EuroMov DHM, an interdisciplinary research unit created in 2021 by the University of Montpellier and IMT Mines Alès, aims to promote cross-fertilization between artificial intelligence, movement sciences, and health, in order to understand human behavioral plasticity and develop new therapeutic approaches. The central focus of the EuroMov DHM Research Unit is human and digital plasticity as seen through the prism of human movement. Human plasticity, or neuroplasticity, refers to the brain's ability to evolve and adapt throughout life. In addition to genetic factors and the environment in which a person evolves, their actions and movements



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play a decisive role in brain plasticity. Understanding the dynamic brain-movement links at different levels will enable us to promote brain plasticity and thus improve sensorimotor recovery or rehabilitation. Analyzing the mechanisms underlying neuroplasticity will enable us, through analogy or mimicry, to develop new models for machine learning or adaptive control of complex systems, to better manage human/machine interaction, and to develop context-sensitive software systems.

2. Job description

As a teacher-researcher at CERIS at IMT Mines Alès and in the EuroMov DHM research unit, you will be entrusted with three main tasks:

- Teaching: Delivering lectures, tutorials, supervising student projects and internships, and contributing to the development of programs by integrating scientific advances.
- Research: Conducting projects related to EuroMov DHM's research themes, scientific publication, supervising doctoral students, partnership-based research, and supporting scientific innovation through the commercialization of research (patents, software).
- Technology transfer: Collaboration with companies and startups, support for innovation and technology transfer projects via the CERIS and EuroMov DHM platforms.

This position combines training, applied research, and innovation, with strong links between academia and industry.

The successful candidate will report to the director of CERIS.

2.1 Teaching activities

Teacher-researchers at Institut Mines-Télécom are responsible for developing teaching programs, coordinating teaching teams, and leading initiatives in educational innovation. The successful candidate will therefore be required to participate, depending on their areas of expertise, in the school's teaching activities, which include:

- General engineering training, Initial Training under Student Status (FISE);
- Specialized engineering training, Initial Training under Apprenticeship Status (FISA);
- Specialized training (master's degrees, specialized master's degrees, continuing education);
- Doctoral training.

Your expertise in applied mathematics, machine learning, and biosignal processing will be an essential asset for the 2IA department's courses, particularly in the modules dedicated to machine learning and the "cognitive engineer" specialty. This specialization aims to train experts in artificial intelligence capable of designing innovative solutions that facilitate user support in their professional and daily activities. This resolutely interdisciplinary program includes courses on human factors, the cognitive uses of technology, and the perception of human-machine interaction from psychological, ethical, and legal perspectives.

You will also be able to contribute to the Teaching Units (UE) of the 2IA department, particularly those that include Teaching Unit Components (ECUE) related to machine learning, applied mathematics, or signal processing.

The successful candidate will be responsible **for coordinating certain UEs** related to artificial intelligence and data science, **as well as teaching some of the courses** in these fields (ECUEs). They will be able to contribute to teaching and educational exercises in the 2IA department, such as:

- Introduction to machine learning for the Computer Science and Networks (InfRes) program through apprenticeship;
- Supervision of research projects: R&D and technical studies;
- Introduction to machine learning (S8 – bachelor's degree level);
- Advanced machine learning (team supervision of the hackathon-S9 – MSc level);
- Teaching in one or more of the department's specializations open to S10 (MSc level): Image analysis and processing (program currently being redesigned); Natural language and speech processing; Deep learning/reinforcement learning, cognitive engineer.



Teaching for non-specialist students is also expected, particularly within elective tracks offered in the core curriculum.of the FISE (Initial Training under Student Status) and FISA (Initial Training under Apprentice Status):

- ECUE "Fundamentals of AI" (lectures/tutorials/practicals in flipped classroom format, parallelized for classes of 140 to 250 students);
- ECUE "Algorithms and Object Programming" (lectures/tutorials/practicals/projects in flipped classroom teaching, parallelized for classes of 250 students);
- Your knowledge may also be used for other FISE core courses (signal processing, statistics, operational research).

The successful candidate will participate in major teaching activities such as juries and thesis defenses and will be asked from time to time to participate in other teaching activities and exercises at the school (supervision of core field assignments, projects, internships, academic tutoring). Some of the teaching may be conducted in English, using active teaching methods.

As a guide, participation in teaching activities represents an average of around 150 hours per year for a teacher-researcher.

The successful candidate will be expected to supervise applied research projects (research and development assignments or technical studies), as well as internships and apprenticeship support. They will also participate in major academic assessments such as juries and thesis defenses and may be asked to participate in other educational activities at the school, including supervising field missions, projects, and academic tutoring.

2.2 Research activities

In line with the scientific orientations of CERIS and the EuroMov DHM research unit, the successful candidate will conduct work focused on the application of machine learning and deep learning to the analysis and modeling of human biosignals (EEG, EMG, ECG, NIRS, HRV, etc.). The main objective will be to design, optimize, and interpret machine learning models capable of characterizing the cerebral, physiological, and behavioral dynamics associated with movement and health.

The work may focus on:

- The development of deep models integrating multiple sources of physiological and behavioral data for the assessment or prediction of sensorimotor performance;
- The exploration of self-supervised or transfer learning methods adapted to low-label data;
- The interpretability and reliability of AI models in the context of digital health, via explainable AI (XAI) and trustworthy AI approaches;
- Designing processing pipelines that leverage deep learning for time series and adaptive spectro-temporal analysis (CNN, LSTM, Transformers, etc.);
- Optimization of models for real-time or embedded environments, particularly in human-system interaction or cognitive assistance devices.

This research will be part of EuroMov DHM's MIB&Co (Monitoring and Improvement of Behavior and Cognition) theme, at the interface between computational neuroscience, neuroergonomics, and artificial intelligence. It will aim to better understand human plasticity through the prism of movement, while contributing to the design of intelligent systems capable of continuous adaptation and learning.

The successful candidate will be required to:

- Design and conduct experimental protocols involving multimodal recordings on human participants;
- Actively participate in the scientific and technical operation of EuroMov DHM platforms (acquisition, synchronization, and preprocessing of biosignals);
- Publish in leading international journals and conferences in machine learning, physiological signal processing, digital health, and computational neuroscience;
- Develop collaborative projects with academic and industrial partners around AI for health and human movement.




This work will contribute to the innovative momentum of the EuroMov DHM unit and to the scientific visibility of IMT Mines Alès in the field of machine learning applied to biosignals and digital health.

2.3 Technology transfer and commercialization activities

Research activities must be subject to standard academic promotion, e.g., publications in journals and conferences, and participation in GdR and IMT communities . The person recruited will also be responsible for getting involved in commercialization activities with partner companies. This may include industrial chairs, setting up and participating in research contracts with industrial partners, or drafting funding applications to public bodies or international programs.
In addition, the person must be able to understand the process of commercial exploitation of research results in order to identify opportunities to contribute to cooperation between academic research, industrial research, and innovation sectors.
Finally, the successful candidate will be required to carry out, within their field of scientific and technical expertise, actions designed to support companies or the IMT Mines Alès incubator in order to promote the creation of spin-offs and the development of technology companies.

3. Required profile and general evaluation criteria

3.1 Required skills, knowledge, and experience

Technical skills

- Significant teaching experience in the Center's research areas and topics, particularly those relevant to the position
- Ability to work in a team of teachers and develop teaching approaches tailored to specific needs.
- Ability to teach while taking into account pedagogical alignment (skills, learning objectives and methods, assessment).
- Knowledge and practice of written and oral communication in English.
- Processing of biosignals.
- Experience in neuroscience.
- Interest in interdisciplinary collaborations.
- Significant research experience in the Center's fields and research topics, particularly those relevant to the position
- Proven experience contributing to research projects with scientific output (publications, conferences, etc.)
- One (or more) international experience(s) would be a plus
- Ability to establish scientific collaborations on experimental research projects
- Ability to promote research work and transfer technology or knowledge to industrial partners

Behavioral and interpersonal skills

- Dynamism
- Autonomy
- Commitment
- Teamwork
- Organizational skills
- Rigorous and methodical
- Initiative
- Adaptability
- Intellectual curiosity
- Creativity and innovation

3.2 Evaluation criteria

The pre-selection committee will review applications based on the following selection criteria:

Required degree: Doctorate in Computer Science, Applied Mathematics, or Signal Processing.

Prevailing selection criteria for teaching activities:

- Level of teaching provided

- Emphasis on pedagogical innovation
- Action and reputation in the field's community

Prevailing selection criteria for research activities

- National and international recognition of research results
- Responsibilities exercised in the field of expertise
- Relationships with the academic and industrial worlds

Responsibilities, organizational activities, and participation in consultation and decision-making bodies are also taken into account in the criteria examined.

4. Application

Administrative conditions for application

Recruitment is open in the discipline of "Computer Science – Artificial Intelligence – Machine Learning."

The position offered by IMT Mines Alès is a full-time, permanent contract under public law, subject to the provisions of the Institut Mines-Télécom management framework, in the role of Senior Lecturer, category C, class 2.

Salary: to be determined based on profile and experience

How to apply?

The application file (to be downloaded from the link provided below) must include a curriculum vitae detailing teaching activities, research work, and relations with the economic and industrial world (10 pages maximum) and, at the discretion of the candidates, letters of recommendation.

It should be sent to: https://institutminestelecom.recruitee.com/o/maitre-de-conferences-en-apprentissage-automatique-applique-au-traitement-des-biosignaux-hf-cdi-imt-mines-ales

Recruitment schedule

Application deadline: December 15, 2025

Indicative date of the pre-selection committee (without the presence of candidates): **January 8, 2026**
Eligible candidates will be notified as soon as possible after this date.

Indicative date of the recruitment committee (interviews with eligible candidates)**: 01/23/2026**
The admissions committee's ranking will be published immediately after the committee meeting.

Desired start date: **03/02/2026**




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Contact persons

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Appendix to the job description for the recruitment of teaching and research staff at IMT Mines Alès

As part of their teaching and research duties, teaching and research staff at our institution are required to carry out a variety of educational activities while contributing to scientific research in their discipline.

The teaching load is spread over the academic year according to the institution's needs.

This distribution may vary depending on specific assignments, ongoing research projects, and changes in the institution's educational and scientific needs.

1. Teaching:

The teaching load is structured around the following elements:

- **Lecture hours (CM)**: These hours correspond to sessions in lecture halls or classrooms, where the teacher-researcher/teacher imparts theoretical knowledge to a group of students.
    - Indicative value: **100 to 150 CM hours per year**, depending on the requirements of the program and discipline.
    - Subjects covered: machine learning, deep learning, signal processing, statistics
- **Tutorials (TD)**: More personalized supervision activities, in which students apply the theoretical concepts covered in lectures through practical exercises, case studies, or projects.
    - Approximate value: **50 to 100 hours of tutorials per year**, depending on the level of the students and the specifics of the program.
    - Subjects covered: machine learning, deep learning, signal processing, statistics
- **Practical work (PW)**: These sessions allow students to carry out experiments, simulations, or laboratory activities under the direct supervision of the teacher-researcher/teacher.
    - Approximate value: **40 to 80 hours of TP per year**, depending on available resources (laboratories, equipment) and the number of students to be supervised.
    - Subjects covered: machine learning, deep learning, signal processing




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2. Additional teaching activities:

In addition to direct teaching, the teacher-researcher/teacher is also involved in several other educational activities that contribute to the training and monitoring of students. These activities include:

- **Project and thesis supervision**: Supporting students in the completion of their final projects or theses, which may include follow-up meetings, grading, and thesis defense.
    - Approximate time commitment: **30 to 50 hours per year**.
- **Internship supervision**: Supervising students' internships in companies or laboratories, ensuring regular evaluation and monitoring.
    - Approximate time commitment: **30 to 40 hours per year**, depending on the number of students involved and the specific features of the program.
- **Educational meetings**: Participate in departmental meetings, educational committees, or examination boards for the management of curricula and training content.
    - Approximate time commitment: **10 to 20 hours per year**.

3. Research and doctoral supervision - if teaching/research position only:

As a teacher-researcher, research activities are also a key aspect of the position. The time dedicated to research, as well as to supervising doctoral students, is included in the total workload, but is often prioritized as part of the institution's scientific commitment.

Doctoral supervision: Supervise doctoral students and participate in their training, support their thesis work, and prepare them for their thesis defenses.

- Indicative value: **30 to 50 hours per year** for doctoral supervision.

This breakdown may vary depending on specific assignments, ongoing research projects, and changes in the institution's educational and scientific needs.

4. Flexibility and adaptation:

The teaching load may be adjusted according to research projects, specific assignments, and changes in the organization of teaching programs. Hours may be adapted according to educational requirements, available resources, and the priorities of IMT Mines Alès.